# FACT SHEET FOR STATE WASTE DISCHARGE PERMIT ST-7405
# FACILITY NAME: INMAN LANDFILL

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## INTRODUCTION

This fact sheet is a companion document to the draft State Waste Discharge Permit No. ST-7405. The Department of Ecology (the Department) is proposing to issue this permit, which will allow discharge of wastewater to the City of Mount Vernon POTW. The proposed permit will also authorize discharge to the City of Burlington POTW as a backup option, should the City of Mount Vernon POTW be temporarily unavailable to receive leachate from the landfill. The proposed permit also contains an authorization to discharge leachate to groundwater and contains the requirement that the Permittee submit information to the Department on the characteristics of downgradient groundwater. This groundwater monitoring information will enable the Department to evaluate whether further groundwater-related requirements should be placed in the permit when the permit is reissued. This fact sheet contains an explanation of the nature of the proposed discharge, the Department's decisions on limiting the pollutants in the wastewater, and the regulatory and technical bases for those decisions.

Washington State law (RCW 90.48.080 and 90.48.160) requires that a permit be issued before discharge of wastewater to waters of the state is allowed. This statute includes commercial or industrial discharges to sewerage systems operated by municipalities or public entities which discharge into public waters of the state. Regulations adopted by the state include procedures for issuing permits and establish requirements which are to be included in the permit (Chapter 173-216 WAC).

This fact sheet and draft permit are available for review by interested persons as described in Appendix A—Public Involvement Information.

The fact sheet and draft permit have been reviewed by the Permittee. Errors and omissions identified in these reviews have been corrected before going to public notice. After the public comment period has closed, the Department will summarize the substantive comments and the response to each comment. The summary and response to comments will become part of the file on the permit and parties submitting comments will receive a copy of the Department's response.

| **GENERAL INFORMATION** | |
|---|---|
| Applicant | Skagit County Public Works Department<br>1800 Continental Place<br>Mount Vernon, WA 98273 |
| Facility Name and Address | Inman Landfill<br>920 Inman Lane<br>Bow, WA 98232 |
| Type of Facility | Closed Landfill |
| Facility Discharge Location | Latitude: 48° 30' 38" N<br>Longitude: 122° 26' 01" W |
| Treatment Plant Receiving Discharge | City of Mount Vernon POTW (WA-002407-4)<br>City of Burlington POTW (WA-002015-0, to be used as backup when City of Mount Vernon POTW is unavailable) |
| Contact at Facility | Name: Gary Sorensen, Gary Stoyka<br>Telephone #: (360) 336-9400 |
| Responsible Official | Name: Gary Sorensen<br>Title: Manager, Solid Waste Division<br>Address: 1111 Cleveland<br>Mount Vernon, WA 98273<br>Telephone #: (360) 336-9400<br>FAX #: (360) 336-9478 |

## BACKGROUND INFORMATION

*DESCRIPTION OF THE FACILITY*

Inman Landfill is located seven and one-half miles northwest of Mount Vernon in Skagit County, Washington. Skagit County Public Works operated the facility on 51 acres of County-owned and leased property. The landfill accepted County-generated municipal waste and demolition debris. In addition, incinerator ash from the Skagit County municipal solid waste incinerator was disposed of in one cell of the landfill. The landfill stopped accepting waste on April 8, 1994, and was finally closed completely during the summer of 1994.

Inman Landfill was built within an old gravel pit along the northeast slope of Bay View Ridge. The landfill began operation in 1972 and was developed in two phases. Phase 1, encompassing approximately 16 acres, began operation in 1972, and reached capacity in 1986. Phase I was closed in 1986 with the following cover system listed in order from top to bottom:

- Vegetative ground cover
- 24-inch topsoil layer
- 24-inch low-permeability soil barrier layer
- 18-inch subgrade layer

A passive gas collection system was also integrated within the final cover system. The passive system is a network of perforated pipe that is used to collect and vent the gas generated by the landfill.

The final cover over Phase I contains a barrier layer, but the side slopes do not. The Phase 2 geomembrane bottom liner was constructed on top of the west side slope of Phase 1.

Phase 2 was first constructed in 1985 for disposal of municipal solid waste and demolition debris. In 1986 and 1988, Phase II was expanded until it reached its final size of approximately 10 acres. The bottom liner systems for the different expansions varied slightly, but generally conformed with the requirements of Chapter 173-304 WAC, the Minimal Functional Standards for Solid Waste Handling.

In 1988, the Resource Recovery Facility began incinerating the County's municipal solid waste. The flow of solid waste to the landfill consisted of solid waste overflow from the incinerator during shut downs, incinerator ash, and demolition debris from 1988 through 1994. Ash from the Skagit County Resource Recovery (i.e. incinerator) was disposed of in a cell at the southwest corner of the landfill. The ash cell is located in a portion of the landfill which has both an impervious cap and an impervious bottom. Hence, the leachate from this portion of the landfill is collected and treated in the leachate aeration pond prior to being discharged to a POTW.

The landfill employs an active gas extraction system. The gas lines are located throughout the landfill, with the gas extraction system located to the south of the leachate aeration pond. Gas is flared at the south end of the property using a single flare. The gas extraction system impacts groundwater quality by removing volatile organic constituents from the system and by lowering gas pressures above the aquifer. Both of these effects reduce the mass transfer driving force resulting in lower gas solubilization rates with respect to ground water.

The scale, drop boxes, and a recycling center, located at the landfill entrance, were removed during closure of the landfill in 1994. A burn pile for wood waste and brush, located at the site's southeast corner, was removed during the landfill closure.

LEACHATE COLLECTION SYSTEM

Leachate is formed when liquids pass through a landfill removing contaminants and their degradation products from solid waste. Decay and fermentation produce gases (e.g. carbon dioxide and methane) and organic acids, which aid in the dissolution of chemical constituents from the waste. Landfills in Western Washington may become partially or totally saturated by winter precipitation, and, in unlined landfills, horizontal or upward flow of groundwater. The rate or degree of saturation and the subsequent leachate production are based on site-specific conditions and landfill operations. The amount of leachate produced and the rate of production are a function of the bulk chemical composition, particle size and hydraulic conductivity of the refuse, and the capacity of the cover and liner material to restrict infiltration of incident precipitation.

The leachate management system at Inman Landfill was constructed during the Phase 2 expansion in 1985. The system consists of leachate collection, conveyance, aeration, storage, and off-site trucking. A network of perforated pipe collects leachate over the composite bottom liner. Leachate is directed outside the landfill's northwest corner to Pump Station (PS) #1. Leachate is lifted approximately 45 vertical feet from PS #1 to the leachate aeration pond. After aeration, pretreated leachate is removed from the pond by vacuum trucks or pumped by PS #2, located adjacent to the aeration pond, into tanker trucks for transportation to a local wastewater treatment plant.

Both pump stations are equipped with six-foot diameter precast rubber gasket manhole sections. PS #1 is approximately 26 feet deep and PS #2 is approximately six feet deep. Both pump stations employ Flyght pumps with five-horsepower motors attached to guide bars for easy pump removal. PS #1 has automated controls that operate when a preset leachate depth within the station is reached.

Condensate is a wastewater which forms in the collection pipes of active gas extraction systems. Part of the condensate from the active gas collection system installed at Inman during the final closure is discharged into the leachate treatment/storage system. The remainder of the condensate flows into storage tanks, which will be pumped out and hauled to the wastewater treatment plant along with the leachate.

LEACHATE AERATION POND

The leachate aeration pond provides temporary leachate storage and pretreatment. Surface aeration provides mixing, aeration, and agitation. The aeration system consists of three-each 7.5-horsepower surface aerators equipped with a float level and mooring cables to account for pond level fluctuations.

Leachate from the newer portion of the landfill is captured in sumps, from which it is pumped to an aeration pond located at the northern side of the landfill site. The aeration system is operated on a regular basis. Permit compliance samples are collected from the pond itself.
The pond bottom consists of double lined plastic. A leak detection port accessing the area between the liners is located at the northeast corner of the pond. The plan dimension of the pond is approximately 75 feet by 75 feet. The depth is approximately twelve feet. The design capacity of the pond is 160,000 gallons. The total pond volume is 234,000 gallons. When leachate depth reaches nine feet, private tankers are contracted to haul leachate to the selected wastewater treatment plant until the leachate depth is less than nine feet. In the past, the City of Burlington and Mount Vernon POTW's have been employed.

The leachate wastewater was formerly trucked to the City of Burlington under the provision of State Waste Discharge Permit ST-7405. The City of Burlington declined to accept additional wastewater in 1994. At that time, the Skagit County commenced discharge of wastewater to the City of Mount Vernon POTW under the provisions of an Administrative Order written in 1994. In addition, the temporary State Waste Discharge Permit issued June 3, 1998, authorized discharge of leachate to the City of Mount Vernon POTW. The County has requested that the proposed permit continue to authorize discharge to the City of Mount Vernon POTW, with the option of using the City of Burlington POTW as a backup option for disposal of the wastewater, should the City of Mount Vernon POTW become temporarily unavailable.

STORM WATER CONTROL SYSTEM

The impervious landfill cover is covered with a soil layer planted with grass, in order to reduce surface water velocities, and to increase infiltration and evapo-transpiration, which will result in a reduction in peak flows.

Surface water runoff from Inman Landfill drains from four storm water drainage basins. Storm water runoff from three of the landfill basins is directed by means of the contouring of the surface to storm water infiltration basins.

Storm water falling on the northeast portion (designated Basin 400) is mainly associated with the old portion (the portion without an impervious bottom) of the landfill. The stormwater falling on this portion of the landfill flows to a pond located at the northeast corner of the site. The pond overflows to Joe Leary Slough. The existing Pond 40 and its overflow structure were upgraded during the 1994 closure activities. Analytical results from the pond suggest no significant impact from leachate exfiltration into surface waters.

STORM WATER POLLUTION PREVENTION PLAN

A Storm Water Pollution Prevention Plan has been prepared by Skagit County Department of Public Works. This plan was prepared as a requirement of the storm water NPDES permit issued by WDOE. The cells have been capped and graded in accordance with the final closure plan. The only material used in the capped areas is herbicide, which is applied on an occasional basis.

CHARACTERISTICS OF POND EFFLUENT

The last sample collected from the pond effluent was collected in 1997, approximately three years after landfill closure. At that time, the Department's NPDES permit manager had made the determination that as both the old and new portions of the landfill had been equipped with an impervious cover, sampling of the effluent from the pond would no longer be required. There is no letter or permit modification in the file to indicate that sampling was no longer required at this point. Instead, a Notice of Temporary State Permit was issued by the Department, which included only the indirect discharge (i.e., discharge to POTW) sampling provisions of the previous NPDES permit. Therefore, sampling requirements for the storm water pond ceased upon expiration of the NPDES permit on June 28, 1998.

At some point late during the sampling program, it was determined that the sample point was impacted by grazing activities occurring upstream of the sample point. The Department changed the sample point to the discharge of the pond itself, to avoid possible impacts from the grazing activities. This change may be responsible for the marked decrease in fecal coliform counts after May 1995. Manganese and iron, the only metals for which samples were analyzed, also showed decreased concentrations, apparently as a result of the sample point change.

| **STORMWATER CHARACTERISTICS-DISCHARGE TO JOE LEARY SLOUGH – OUTFALL 001** | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **$BOD_5$ (mg/L)** | **Coliform Fecal (MPN)** | **Fe (mg/L)** | **Mn (mg/L)** | **Ammonia Nitrogen (as N) (mg/L)** | **TDS (mg/L)** | **TSS (mg/L)** | **Turbidity (mg/L)** | **Oil & Grease (mg/L)** | **Phosphorus (mg/L)** |
| **May 1995** | <4 | 900 | 2.82 | 0.262 | <0.05 | 619 | 31 | 11.9 | 1 | 0.31 |
| **April 1996** | <4 | 5.7 | 0.365 | 0.13 | <0.05 | 212 | <5 | 2.7 | <5 | 0.03 |
| **April 1997** | <5 | <2 | 0.14 | 0.059 | 0.02 | 290 | 30 | 2.9 | <5 | 0.15 |

Based on the above analytical results, storm water flowing to Joe Leary Slough from Outfall 001 ceased to be affected by pollutants from landfill activities, following the relocation of the sample point to a point upstream of intensive cattle grazing activities. Therefore, the proposed permit does not contain an authorization to discharge stormwater to the surface. As there is no apparent adverse impact to stormwater quality, the Department has determined that an NPDES stormwater permit is no longer required for the landfill runoff.

GROUNDWATER MONITORING PROGRAM

A shallow perched aquifer is located under the landfill site. The constituent groundwater of this aquifer flows in a southerly direction.

A deeper, regional aquifer exhibits a radial movement directed generally toward the north and east.

The landfill is subject to groundwater monitoring using wells, in compliance with WAC 173-304 requirements. The monitoring program has been approved by WDOE (Solid Waste Program) and the Skagit County Health Department. Due to possible effects from leachate infiltration from the unsealed portion of the landfill, residences downgradient have been supplied with a piped potable water supply. The proposed permit contains the requirement that the Permittee submit periodic groundwater monitoring analytical data. This data will enable the Department to evaluate whether additional groundwater-related requirements need to be incorporated when the proposed permit is reissued.

*PERMIT STATUS*

The previous permit for this facility was issued on June 28, 1994. It expired on June 28, 1998.

An Application for Permit Renewal was submitted to the Department on February 17, 1998, and accepted by the Department on May 29, 1998.

A Notice of Temporary Permit letter was sent on June 3, 1998, with an expiration date of June 28, 2003. This temporary permit authorized discharge to the City of Mount Vernon POTW. This permit notice included, by reference, only those portions of the NPDES permit requirement which were applicable to discharge to the POTW. The existing application for a State Waste Discharge Permit application has the City of Mount Vernon's signature in Part J.

*SUMMARY OF COMPLIANCE WITH THE PREVIOUS PERMIT*

The facility was inspected by WDOE Water Quality on June 6, 1996. The inspector noted that the landfill had been closed in compliance with the solid waste rules and regulations. The observation was also made that the majority of the surface water runoff had been diverted to infiltration ponds. In addition, it was noted that a small portion of the surface runoff drains to a storm water pond which has an overflow to Joe Leary Slough.

Inman Landfill also received a WDOE Water Quality inspection on May 22, 1998. The inspection report contained the observation that leachate was being hauled to the City of Mount Vernon Wastewater Treatment Plant. In addition, the inspection report contained a statement that the leachate had remained in compliance with effluent limitations with the exception of a few low pH excursions. Of particular note was the recommendation by the inspector that "since the landfill is now closed, and controls the discharge of the storm water runoff, an NPDES permit is no longer required."

The facility last received a WDOE Water Quality inspection on March 27, 2003. At the time of the inspection, the aeration devices were in operation. In addition, BOD assays from leachate discharge

strongly suggest that the aeration system is operated on a regular basis. Permit compliance samples are collected from the pond itself. The pond bottom consists of double lined plastic.

During the history of the previous permit, the Permittee has remained in compliance based on Discharge Monitoring Reports (DMRs) and other reports submitted to the Department and inspections conducted by the Department.

*WASTEWATER CHARACTERIZATION*

The concentration of pollutants in the discharge was reported in the permit application and in Discharge Monitoring Reports. The proposed wastewater discharge is characterized for the following parameters:

**INMAN LANDFILL - SUMMARY OF POLLUTANT CONCENTRATIONS IN EFFLUENT DISCHARGED TO POTW – SAMPLE POINT 002 (Samples Collected January 2000 through March 2002)**

| Parameter | Minimum | Average | Maximum |
|---|---|---|---|
| Flow, gpd[1] | 31,200 | 43,000 | 56,000 |
| $BOD_5$, mg/L | 4 | 36 | 112 |
| Arsenic, T, mg/L | 0.006 | 0.012 | 0.026 |
| Cadmium, T, mg/L | <0.001 | 0.0037 | 0.02 |
| Chromium, T, mg/L | 0.003 | 0.0105 | 0.015 |
| Copper, T, mg/L | 0.032 | 0.074 | 0.124 |
| Cyanide, T, mg/L | <0.01 | 0.037 | 0.06 |
| Lead, T, mg/L | 0.001 | 0.0026 | 0.009 |
| Mercury, T, mg/L | <0.001 | <0.001 | <0.001 |
| Nickel, T, mg/L | 0.03 | 0.058 | 0.10 |
| Nitrogen, Total Kjeldahl, mg/L | 1.7 | 47.02 | 136 |
| Oil & Grease, mg/L | 0.5 | 1.06 | 2.9 |
| pH, standard pH units | 4.7 | 6.25 | 7.99 |
| Selenium, T, mg/L | <0.001 | 0.0078 | 0.014 |
| Silver, T, mg/L | <0.001 | <0.001 | <0.001 |
| Total Suspended Solids, mg/L | <5 | 89.9 | 389 |
| Zinc, T, mg/L | 0.01 | 0.0336 | 0.067 |

[1] Flow maxima, minima, means are based on flow values for the months during which discharges to the POTW were made.

CHARACTERISTICS OF PRETREATED LEACHATE – COMPARISON WITH GROUNDWATER STANDARDS

Pollutant assays from samples collected from the leachate aeration pond are indicated below. The values of these pollutants appear to be far below the concentrations likely to result in pass-through or interference at the POTW.

The leachate from the pond is not discharged to groundwater. Nevertheless, Groundwater Standards from WAC 173-200 are shown for reference purposes in the top row of the table below. Some leachate from the old portion of the landfill without the impervious bottom is likely to be reaching groundwater. However, the impervious cap placed over the top of the old portion of the landfill greatly reduces the volume of leachate generated over time. The leachate from the new portion of the landfill may be similar in character to the leachate from the old portion of the landfill. It appears that arsenic and selenium are the only values which exceed the groundwater quality criteria. The significance of this observation is muted by the failure to consider the effects of the assimilative capacity of the soil to remove these pollutants prior to reaching groundwater.

| **CHARACTERISTICS OF PRETREATED LEACHATE – OUTFALL 002** | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Date** | **Arsenic (mg/L)** | **$BOD_5$ (mg/L)** | **Cadmium (mg/L)** | **Chromium (mg/L)** | **Copper (mg/L)** | **Cyanide (mg/L)** | **Lead (mg/L)** | **Mercury (mg/L)** |
| **Groundwater Standards** | 0.00005 | N/A | 0.01 | 0.05 | 1.0 | N/A | 0.05 | 0.002 |
| **Mar 2001** | 0.018 | 29 | 0.02 | 0.013 | 0.089 | 0.06 | 0.003 | <0.001 |
| **June 2001** | 0.014 | 8 | <0.001 | 0.006 | 0.057 | 0.05 | <0.001 | <0.001 |
| **Sept 2001** | 0.026 | 23 | <0.001 | 0.017 | 0.124 | 0.03 | <0.001 | <0.001 |
| **Dec 2001** | 0.009 | 4 | <0.001 | 0.005 | 0.055 | <0.01 | 0.001 | <0.001 |
| **Mar 2002** | 0.006 | 15 | <0.001 | 0.003 | 0.032 | <0.01 | <0.005 | <0.001 |
| **July 2002** | 0.014 | 11 | <0.005 | 0.005 | 0.026 | <0.01 | <0.005 | <0.001 |
| **Sept 2002** | 0.023 | 30 | <0.005 | 0.009 | <0.025 | <0.01 | <0.005 | <0.001 |
| **Dec 2002** | 0.026 | 20 | <0.005 | 0.01 | <0.025 | <0.01 | <0.005 | <0.001 |

| **CHARACTERISTICS OF PRETREATED LEACHATE – OUTFALL 002 (Table Continued)** | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Date** | **Nickel (mg/L)** | **TKN (as N) (mg/L)** | **Oil & Grease (mg/L)** | **Selenium (mg/L)** | **Silver (mg/L)** | **TSS (mg/L)** | **Zinc (mg/L)** |
| **Groundwater Standards** | N/A | N/A | N/A | 0.01 | 0.05 | N/A | 5.0 |
| **March 2001** | 0.06 | 25.1 | 0.6 | 0.009 | <0.001 | 223 | 0.046 |
| **June 2001** | 0.049 | 71.6 | <1 | 0.007 | <0.001 | 17 | 0.01 |
| **Sept 2001** | 0.10 | 136 | <1 | 0.013 | <0.001 | 24 | 0.067 |
| **Dec 2001** | 0.038 | 55.9 | <1 | 0.008 | <0.001 | 5 | 0.015 |
| **Mar 2002** | 0.03 | 56.8 | <1 | 0.009 | <0.001 | 33 | 0.015 |
| **July 2002** | 0.051 | 7 | <2.5 | 0.007 | 0.001 | 17 | 0.01 |
| **Sept 2002** | 0.064 | 8 | <2.5 | 0.068 | <0.005 | 64 | 0.029 |
| **Dec 2002** | 0.066 | 11 | 2.5 | 0.16 | <0.005 | 120 | 0.055 |

*SEPA COMPLIANCE*

This is a renewal of a preexisting permit for a preexisting discharger. Therefore, there is no requirement for submittal of a SEPA checklist.

## PROPOSED PERMIT LIMITATIONS

State regulations require that limitations set forth in a waste discharge permit must be based on the technology available to treat the pollutants (technology-based) or be based on the effects of the pollutants to the POTW (local limits). Wastewater must be treated using all known, available and reasonable treatment (AKART) and not interfere with the operation of the POTW.

The more stringent of the local limits-based or technology-based limits are applied to each of the parameters of concern. Each of these types of limits is described in more detail below.

*EFFLUENT LIMITATIONS BASED ON LOCAL LIMITS*

In order to protect the City of Mount Vernon POTW and City of Burlington POTW from pass-through, interference, concentrations of toxic chemicals that would impair beneficial or designated uses of sludge, or potentially hazardous exposure levels, effluent limitations for certain parameters are necessary. These limitations are based on local limits developed by the Department in 1994 for application in the existing permit. These local limits-based standards for metals are maintained in the proposed permit, with the exception that more stringent AKART-based limitations have been applied in the case of cadmium, chromium, and lead as described in the AKART section immediately below.

Pollutant concentrations in the proposed discharge with technology-based controls in place are not expected cause problems at the receiving POTW, such as interference, pass-through, or hazardous exposure to POTW workers, nor are they expected to result in unacceptable pollutant levels in the POTW's sludge.

*TECHNOLOGY-BASED EFFLUENT LIMITATIONS*

All waste discharge permits issued by the Department must specify conditions requiring available and reasonable methods of prevention, control, and treatment of discharges to waters of the state (WAC 173-216-110). Limitations placed in the permit issued in 1994 were based on the calculation of local limitations for the POTW's receiving the discharge. A review of those limitations at the time of the drafting of the proposed permit suggested that the limitations for a number of critical parameters were higher than typical AKART standards. Therefore, the standards for these metals were adapted from federal categorical limitations. Specifically, the lead and chromium limitations (0.5 and 1.0 mg/L, respectively) in the proposed permit are based on categorical limitations from 40 CFR Part 437.6 (Metals Subcategory, Pretreatment Standards for Existing Sources of the Centralized Waste Treatment Category). In addition, the cadmium limitation (0.11 mg/L) is based on 40 CFR Part 433.17 Pretreatment Standards for New Sources in the Metal Finishing Category. The rationale for utilization of these standards is that if Inman Landfill had to treat its leachate, it would probably employ the same metals removal technology (pH adjustment with polymer assisted settling) as used in the above-referenced industries. In fact, the metals concentrations are sufficiently low in the landfill effluent, that an extra settling step is not expected to be required.

In addition, the proposed permit contains the requirement that AKART be applied to leachate being discharged to state waters, including both surface and groundwater. Normally, the Department considers application of an impervious cap to be consistent with AKART for the closure of old unlined landfills. The Department also normally considers installation of an impervious cap and suitable gas collection system to be consistent with AKART for the closure of landfills equipped with impervious bottom liners. Both the unlined and lined portions of Inman Landfill have been capped with a composite cover system approved by the Department of Ecology. Although Phase I (the unlined portion of the landfill) was closed under Chapter 173-301 WAC, the specifications of the cover system exceed those set forth under Chapter 173-304 WAC. The closure of Phase II (the newer portion of the landfill) is consistent with the requirements of Chapter 173-304 WAC and 173-306 WAC.

*COMPARISON OF LIMITATIONS IN THE PROPOSED PERMIT WITH THOSE IN THE EXISTING PERMIT ISSUED JUNE 28, 1994*

A comparison of permit limitations for discharge to POTW, in the existing and proposed permits is indicated in the table below:

| **COMPARISON OF PERMIT LIMITATIONS IN EXISTING AND PROPOSED PERMIT** | | |
|---|---|---|
| **Parameter** | **Limitations in Existing Permit, Maximum Daily** | **Limitations in Proposed Permit, Maximum Daily** |
| Flow | N/A (report only) | N/A (report only) |
| Oil and Grease, mg/L | 100 | 100 |
| pH | Within the range of 5.0 to 9.0 | Within the range of 5.0 to 9.0 |
| Arsenic (T), mg/L | 1.0 | 1.0 |
| Cadmium (T), mg/L | 0.5 | 0.11 |
| Chromium (T), mg/L | 2.5 | 1.0 |
| Copper (T), mg/L | 1.0 | 1.0 |
| Lead (T), mg/L | 2.5 | 0.5 |
| Mercury (T), mg/L | 0.01 | 0.01 |
| Selenium (T), mg/L | 0.5 | 0.5 |
| Silver (T), mg/L | 2.5 | 2.5 |

## MONITORING REQUIREMENTS

Monitoring, recording, and reporting are specified to verify that the treatment process is functioning correctly, and that effluent limitations are being achieved (WAC 173-216-110).

The monitoring schedule is detailed in the proposed permit under Conditions S1 and S2. Specified monitoring frequencies take into account the quantity and variability of the discharge, the treatment method, past compliance, significance of pollutants, and cost of monitoring.

Effluent limitations were not set for $BOD_5$ and total suspended solids due to the relatively low concentrations of these parameters in the leachate compared to domestic wastewater. Available data indicates that these parameters are normally present at concentrations comparable to or less than those encountered in normal domestic wastewater. The municipal treatment plants receiving the discharge are designed to reduce $BOD_5$ and TSS in conformance with AKART requirements. The Permittee is required to monitor these parameters in order to detect any possible increases in these parameters as the result of changing conditions following closure of the landfill.

## OTHER PERMIT CONDITIONS

*REPORTING AND RECORDKEEPING*

The conditions of S3 are based on the authority to specify any appropriate reporting and recordkeeping requirements to prevent and control waste discharges [WAC 173-216-110 and 40 CFR 403.12 (e),(g), and (h)].

*OPERATIONS AND MAINTENANCE*

The proposed permit contains Condition S.5 as authorized under Chapter 173-240-150 WAC and Chapter 173-216-110 WAC. It is included to ensure proper operation and regular maintenance of equipment, and to ensure that adequate safeguards are taken so that constructed facilities are used to their optimum potential in terms of pollutant capture and treatment. The proposed permit contains the requirement that the Permittee periodically review and update, as necessary, a Treatment System Operating Plan.

*PROHIBITED DISCHARGES*

Certain pollutants are prohibited from being discharged to the POTW. These include substances which cause pass-through or interference, pollutants which may cause damage to the POTW or harm to the POTW workers (Chapter 173-216 WAC) and the discharge of designated dangerous wastes not authorized by this permit (Chapter 173-303 WAC).

*DILUTION PROHIBITED*

The Permittee is prohibited from diluting its effluent as a partial or complete substitute for adequate treatment to achieve compliance with permit limitations.

*NONROUTINE AND UNANTICIPATED DISCHARGES*

Occasionally, this facility may generate wastewater which is not characterized in their permit application because it is not a routine discharge and was not anticipated at the time of application. These typically are waters used to pressure test storage tanks or fire water systems or leaks from drinking water systems. These are typically clean waste waters but may be contaminated with pollutants. The permit contains an authorization for nonroutine and unanticipated discharges. The permit requires a characterization of these waste waters for pollutants and examination of the opportunities for reuse. Depending on the nature and extent of pollutants in this wastewater and opportunities for reuse, Ecology may authorize a direct discharge via the process wastewater outfall, require the wastewater to be placed through the facilities wastewater treatment process or require the water to be reused.

*GENERAL CONDITIONS*

General Conditions are based directly on state laws and regulations and have been standardized for all industrial waste discharge to POTW permits issued by the Department.

Condition G1 requires responsible officials or their designated representatives to sign submittals to the Department. Condition G2 requires the Permittee to allow the Department to access the treatment system, production facility, and records related to the permit. Condition G3 specifies conditions for modifying, suspending, or terminating the permit. Condition G4 requires the Permittee to apply to the Department prior to increasing or varying the discharge from the levels stated in the permit application. Condition G5 requires the Permittee to construct, modify, and operate the permitted facility in accordance with approved engineering documents. Condition G6 prohibits the Permittee from using the permit as a basis for violating any laws, statutes, or regulations. Conditions G7 and G8 relate to permit renewal and transfer. Condition G9 requires the Permittee to control production or wastewater discharge in order to maintain compliance with the permit. Condition G10 prohibits the reintroduction of removed pollutants into the effluent stream for discharge. Condition G11 requires the payment of permit fees. Condition G12 describes the penalties for violating permit conditions.

## PUBLIC NOTIFICATION OF NONCOMPLIANCE

A list of all industrial users which were in significant noncompliance with Pretreatment Standards or Requirements during any of the previous four quarters may be annually published by the Department in a local newspaper. Accordingly, the Permittee is apprised that noncompliance with this permit may result in publication of the noncompliance.

## RECOMMENDATION FOR PERMIT ISSUANCE

This proposed permit meets all statutory requirements for authorizing a wastewater discharge, including those limitations and conditions believed necessary to control toxics. The Department proposes that the permit be issued to be valid for a period of five (5) years.

## REFERENCES FOR TEXT AND APPENDICES

Washington State Department of Ecology.

Laws and Regulations (http://www.ecy.wa.gov/laws-rules/index.html)

Permit and Wastewater Related Information
(http://www.ecy.wa.gov/programs/wq/wastewater/index.html)

## APPENDICES

*APPENDIX A—PUBLIC INVOLVEMENT INFORMATION*

The Department has tentatively determined to reissue a permit to the applicant listed on page one of this fact sheet. The permit contains conditions and effluent limitations which are described in the rest of this fact sheet.

Public Notice of Application (PNOA) was published on September 3, 2002, and September 10, 2002, in the *Skagit Valley Herald* to inform the public that an application had been submitted and to invite comment on the reissuance of this permit.

The Department published a Public Notice of Draft (PNOD) on October 24, 2003, in the *Skagit Valley Herald* to inform the public that a draft permit and fact sheet were available for review. Interested persons were invited to submit written comments regarding the draft permit. The draft permit, fact sheet, and related documents were available for inspection and copying between the hours of 8:00 a.m. and 5:00 p.m. weekdays, by appointment, at the regional office listed below. Written comments were mailed to:

Water Quality Permit Coordinator
Washington State Department of Ecology
Northwest Regional Office
3190 – 160th Avenue SE
Bellevue, WA 98008-5452

Any interested party may comment on the draft permit or request a public hearing on this draft permit within the thirty (30)-day comment period to the address above. The request for a hearing shall indicate the interest of the party and reasons why the hearing is warranted. The Department will hold a hearing if it determines there is a significant public interest in the draft permit (WAC 173-216-100). Public notice regarding any hearing will be circulated at least thirty (30) days in advance of the hearing. People expressing an interest in this permit will be mailed an individual notice of hearing.

Comments should reference specific text followed by proposed modification or concern when possible. Comments may address technical issues, accuracy and completeness of information, the scope of the facility's proposed coverage, adequacy of environmental protection, permit conditions, or any other concern that would result from issuance of this permit.

The Department will consider all comments received within thirty (30) days from the date of public notice of draft indicated above, in formulating a final determination to issue, revise, or deny the permit. The Department's response to all significant comments is available upon request and will be mailed directly to people expressing an interest in this permit.

Further information may be obtained from the Department by telephone, 425-649-7025, or by writing to the address listed above.

*APPENDIX B—GLOSSARY*

**Ammonia**—Ammonia is produced by the breakdown of nitrogenous materials in wastewater. Ammonia is toxic to aquatic organisms, exerts an oxygen demand, and contributes to eutrophication. It also increases the amount of chlorine needed to disinfect wastewater.

**Average Monthly Discharge Limitation**—The average of the measured values obtained over a calendar month's time.

**Best Management Practices (BMPs)**—Schedules of activities, prohibitions of practices, maintenance procedures, and other physical, structural, and/or managerial practices to prevent or reduce the pollution of waters of the State. BMPs include treatment systems, operating procedures, and practices to control: plant site runoff, spillage, or leaks; sludge or waste disposal; or drainage from raw material storage. BMPs may be further categorized as operational, source control, erosion and sediment control, and treatment BMPs.

**$BOD_5$**—Determining the Biochemical Oxygen Demand of an effluent is an indirect way of measuring the quantity of organic material present in an effluent that is utilized by bacteria. The $BOD_5$ is used in modeling to measure the reduction of dissolved oxygen in a receiving water after effluent is discharged. Stress caused by reduced dissolved oxygen levels makes organisms less competitive and less able to sustain their species in the aquatic environment. Although BOD is not a specific compound, it is defined as a conventional pollutant under the federal Clean Water Act.

**Bypass**—The intentional diversion of waste streams from any portion of the collection or treatment facility.

**Categorical Pretreatment Standards**—National pretreatment standards specifying quantities or concentrations of pollutants or pollutant properties which may be discharged to a POTW by existing or new industrial users in specific industrial subcategories.

**Compliance Inspection - Without Sampling**—A site visit for the purpose of determining the compliance of a facility with the terms and conditions of its permit or with applicable statutes and regulations.

**Compliance Inspection - With Sampling**—A site visit to accomplish the purpose of a Compliance Inspection - Without Sampling and as a minimum, sampling and analysis for all parameters with limits in the permit to ascertain compliance with those limits; and, for municipal facilities, sampling of influent to ascertain compliance with the 85 percent removal requirement. Additional sampling may be conducted.

**Composite Sample**—A mixture of grab samples collected at the same sampling point at different times, formed either by continuous sampling or by mixing discrete samples. May be "time-composite" (collected at constant time intervals) or "flow-proportional" (collected either as a constant sample volume at time intervals proportional to stream flow, or collected by increasing the volume of each aliquot as the flow increased while maintaining a constant time interval between the aliquots).

**Construction Activity**—Clearing, grading, excavation, and any other activity which disturbs the surface of the land. Such activities may include road building; construction of residential houses, office buildings, or industrial buildings; and demolition activity.

**Continuous Monitoring—**Uninterrupted, unless otherwise noted in the permit.

**Engineering Report**—A document, signed by a professional licensed engineer, which thoroughly examines the engineering and administrative aspects of a particular domestic or industrial wastewater facility. The report shall contain the appropriate information required in WAC 173-240-060 or 173-240-130.

**Grab Sample**—A single sample or measurement taken at a specific time or over as short a period of time as is feasible.

**Industrial User**—A discharger of wastewater to the sanitary sewer which is not sanitary wastewater or is not equivalent to sanitary wastewater in character.

**Industrial Wastewater**—Water or liquid-carried waste from industrial or commercial processes, as distinct from domestic wastewater. These wastes may result from any process or activity of industry, manufacture, trade or business; from the development of any natural resource; or from animal operations such as feed lots, poultry houses, or dairies. The term includes contaminated storm water and, also, leachate from solid waste facilities.

**Interference**—A discharge which, alone or in conjunction with a discharge or discharges from other sources, both:

- Inhibits or disrupts the POTW, its treatment processes or operations, or its sludge processes, use or disposal; and

- Therefore is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation) or of the prevention of sewage sludge use or disposal in compliance with the following statutory provisions and regulations or permits issued thereunder (or more stringent State or local regulations): Section 405 of the Clean Water Act, the Solid Waste Disposal Act (SWDA) [including Title II, more commonly referred to as the Resource Conservation and Recovery Act (RCRA), and including State regulations contained in any State sludge management plan prepared pursuant to Subtitle D of the SWDA], sludge regulations appearing in 40 CFR Part 507, the Clean Air Act, the Toxic Substances Control Act, and the Marine Protection, Research and Sanctuaries Act.

**Local Limits**—Specific prohibitions or limits on pollutants or pollutant parameters developed by a POTW.

**Maximum Daily Discharge Limitation**—The highest allowable daily discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. The daily discharge is calculated as the average measurement of the pollutant over the day.

**Method Detection Level (MDL)—**The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is above zero and is determined from analysis of a sample in a given matrix containing the analyte.

**Pass-through**—A discharge which exits the POTW into waters of the state in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation), or which is a cause of a violation of state water quality standards.

**pH**—The pH of a liquid measures its acidity or alkalinity. A pH of 7 is defined as neutral, and large variations above or below this value are considered harmful to most aquatic life.

**Potential Significant Industrial User**—A potential significant industrial user is defined as an Industrial User which does not meet the criteria for a Significant Industrial User, but which discharges wastewater meeting one or more of the following criteria:

a. Exceeds 0.5% of treatment plant design capacity criteria and discharges <25,000 gallons per day; or

b. Is a member of a group of similar industrial users which, taken together, have the potential to cause pass-through or interference at the POTW (e.g. facilities which develop photographic film or paper, and car washes).

The Department may determine that a discharger initially classified as a potential significant industrial user should be managed as a significant industrial user.

**Quantitation Level (QL)—**A calculated value five times the MDL (method detection level).

**Significant Industrial User (SIU)**—

1. All industrial users subject to Categorical Pretreatment Standards under 40 CFR 403.6 and 40 CFR Chapter I, Subchapter N; and

2. Any other industrial user that: discharges an average of 25,000 gallons per day or more of process wastewater to the POTW (excluding sanitary, noncontact cooling, and boiler blow-down wastewater); contributes a process wastestream that makes up 5 percent or more of the average dry weather hydraulic or organic capacity of the POTW treatment plant; or is designated as such by the Control Authority* on the basis that the industrial user has a reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement [in accordance with 40 CFR 403.8(f)(6)].

Upon finding that the industrial user meeting the criteria in paragraph 2, above, has no reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement, the Control Authority* may at any time, on its own initiative or in response to a petition received from an industrial user or POTW, and in accordance with 40 CFR 403.8(f)(6), determine that such industrial user is not a significant industrial user.

*The term "Control Authority" refers to the Washington State Department of Ecology in the case of nondelegated POTWs or to the POTW in the case of delegated POTWs.

**Slug Discharge**—Any discharge of a nonroutine, episodic nature, including but not limited to an accidental spill or a noncustomary batch discharge to the POTW. This may include any pollutant released at a flow rate which may cause interference with the POTW.

**State Waters**—Lakes, rivers, ponds, streams, inland waters, underground waters, salt waters, and all other surface waters and watercourses within the jurisdiction of the state of Washington.

**Stormwater**—That portion of precipitation that does not naturally percolate into the ground or evaporate, but flows via overland flow, interflow, pipes, and other features of a storm water drainage system into a defined surface water body, or a constructed infiltration facility.

**Technology-based Effluent Limit**—A permit limit that is based on the ability of a treatment method to reduce the pollutant.

**Total Coliform Bacteria**—A microbiological test which detects and enumerates the total coliform group of bacteria in water samples.

**Total Dissolved Solids**—That portion of total solids in water or wastewater that passes through a specific filter.

**Total Suspended Solids (TSS)**—Total suspended solids is the particulate material in an effluent. Large quantities of TSS discharged to a receiving water may result in solids accumulation. Apart from any toxic effects attributable to substances leached out by water, suspended solids may kill fish, shellfish, and other aquatic organisms by causing abrasive injuries and by clogging the gills and respiratory passages of various aquatic fauna. Indirectly, suspended solids can screen out light and can promote and maintain the development of noxious conditions through oxygen depletion.

**Water Quality-based Effluent Limit**—A limit on the concentration of an effluent parameter that is intended to prevent the concentration of that parameter from exceeding its water quality criterion after it is discharged into a receiving water.